

From

THE CLIMATIC TREASURY
WITH SPECIAL REFERENCE
TO ALPS FLATZ

By Dr. MCAL
Professor of Clinical Medicine

It is generally admitted that
the climate of the Alps is often con-
sidered as a most desirable one
and although a residence
in a mountainous region
is a very healthy one
it is not without its dangers
and a residence at
such a place is often
attended by phre-
nological dangers, but it is
not generally by the profes-
sion of medicine that the
dangers of Alpine
regions are of the ordinary
kind of consumption
The climate, travelling between
the mountains to and from
the valleys occupies forty-
eight hours to accomplish the journey
from £8 to £12 in
the month. The cost of living
is very low.

London, 10 hours
Birmingham, 10 hours
Zurich, 10 hours
Basle, 10 hours
Bern, 10 hours
Geneva, 10 hours
That is, 10 hours



ON THE CLIMATIC TREATMENT OF CONSUMPTION,
WITH SPECIAL REFERENCE TO A VISIT TO
DAVOS PLATZ.

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(Read before the Medico-Chirurgical Society of Glasgow, 12th December, 1879.)

IT is generally admitted that, in chronic pulmonary phthisis, a change of climate often constitutes a most important part of the treatment, especially during the months of winter and of spring. And although a residence in the sunny south is often beneficial by allowing patients to be much in the open air, and by guarding them against great and sudden atmospheric changes, still it must be admitted that the balance of opinion is in favour either of long sea voyages, under suitable conditions, or of a residence at high altitudes. The latter has long been recommended by physicians in America and on the Continent of Europe, but it is only now beginning to be discussed seriously by the profession in this country.

Having during the past summer paid a visit to Davos Platz, the most famous of Alpine health resorts, I propose giving a few particulars of the locality, and my opinion of its value in the treatment of consumption.

The actual travelling between Glasgow and Davos, irrespective of journeyings to and from railway stations, and haltings by the way, occupies forty-three hours,* so that the invalid can easily accomplish the journey in about a week, and at a cost of from £8 to £12 in all, according to the mode of travelling. The cost of living there varies from six to ten francs a day.

* Glasgow to London, 10 hours; London to Paris, 10 hours; Paris to Basle, 10½ hours; Basle to Zurich, 2½ hours; (a) Zurich to Landquart, 3¾ hours; Landquart to Davos Platz (by diligence through the Prätigau), 7 hours. (b) Or Zurich to Coire, 4½ hours; and thence by diligence through the Landwasser Thal, in 8½ hours.

For ten or twelve years it has been a favourite health resort with Germans labouring under pulmonary complaints, but it is only within the last four years that it has been frequented by our own countrymen in search of health, and now it is gaining rapidly in popularity, so much so, indeed, that there is a fear, which has already in a measure been verified, that many unsuitable cases may be sent there. In the winter of 1875 there were only about 6 English patients in Davos; in 1876, 16 to 18; in 1877, 36; and in 1878, about 200; and it is thought probable that this winter there will be close upon 350. "The first two patients," says a recent writer,† "of which the place can boast, were happy in their choice, when they selected Davos, some dozen years ago, as the spot to test on their persons the then still debated system of treating consumption by a residence in high Alpine air. One of them was a German medical man of experience, who arrived with good diplomas in his pocket, but a very bad lung under his waistcoat. He was accompanied by a young friend of pleasing but effeminate exterior, whose face, guiltless of the capillary appendages usual to the masculine countenance, gave rise to the belief in the minds of the then unsophisticated peasantry that he was a Polish princess in disguise; and the uncomfortable result was that the door of the one modest hostelry was for long closed against the pair on that wintry afternoon. Notwithstanding this inauspicious reception, the German physician and his supposed lady-love regained health rapidly, and when they showed themselves again in Germany, were admirable living advertisements both of the system and the place."

Davos is 5,200 feet above the level of the sea, and is very prettily situated in a valley of considerable breadth, which runs N.N.W. and S.S.E., so that the sun shines upon it for many hours even on the shortest winter day: its soil is dry, and the air is still, for, except towards the S.E., it is sheltered by high mountains in every direction, while of course it is highly rarefied, being nearly one-fifth lighter than it is at the level of the sea. The ground is covered from November to March with snow, which is crisp and hard, and does not melt under the influence of the hottest sun, unless the Föhn, or generalized south-west wind, makes its appearance, a comparatively rare phenomenon, fortunately, for it is very depressing, and apt to prove injurious to patients.

† *Davos Platz; a New Alpine Resort for Sick and Sound, in Summer and Winter.* By One who Knows it Well. London: Edward Stanford. 55 Charing Cross, S.W. 1878.

The solar radiation is intense, although the air itself is cool and refreshing: this is illustrated by the fact that the temperature in the shade may be below the freezing point, while Casella's black bulb vacuum thermometer may register 130° F. in the sun, so that the snow does not melt upon the ground. In winter, the solar radiation may be such that the thermometer may register even 165° F., but at night the temperature may fall very low, even some degrees below zero. When I was there, in September, the temperature in the shade was 44° F., while, in the sun, the black bulb thermometer registered 120° F., and one could walk with comfort and with pleasure. "To sum up," says Dr. Williams, "Davos . . . has a winter climate of which the characteristic is a still, cold, and dry, rarefied atmosphere, easily permeable to the full effects of the solar radiation." *

The first person who addressed me on my arrival was an active, healthy looking man of middle age, and who was afterwards described to me as being now "a very powerful man." He came from the north of Germany about six years ago, labouring under phthisis, from which he has completely recovered, and is now manager of one of the principal hotels, which, as most of us are aware, is no sinecure. On sitting down to dinner the same evening, I found opposite me a German gentleman, with whom I entered into conversation. He also has resided at Davos for the greater part of six years. When he arrived he was suffering from hæmorrhagic phthisis, and now he is strong and well; and, as he finds himself in better health there than anywhere else, he intends making it his home, and occupying himself as a teacher of languages. He is in the open air, he told me, the whole of the twenty-four hours, as he sleeps with his window open both in summer and winter. The day following, I was introduced to a lady of middle age, active, energetic, and full of spirits, and who was just upon the point of starting for a pic-nic a good many miles away, which she herself had organised. She took up her abode at Davos about four years ago, and hers was a "bad case of phthisis;" yet in two years she was well, but she seems to enjoy the place, and to feel better there than elsewhere, so that she has taken up her abode there permanently, although she leaves it for three or four months in summer, going to Geneva, Aix-les-Bains, or Paris.

Many other instances of a similar nature were met with, but it is unnecessary to refer to them individually. I therefore pass on to speak of a few of the cases which I had the opportunity

* *The Lancet*, 9th August, 1879.

of examining for myself, along with my friend, Dr. Ruedi, and which were taken pretty much at random, except in so far as they illustrated the effects of a residence at Davos for different periods of time.

The first was a young lady, whom I saw in the neighbourhood of Glasgow, in consultation with her medical attendant, in the month of July. She was then suffering under chronic phthisis of fully a year's duration, without marked general symptoms, but with consolidation of the whole of the left lung, especially at the apex and base, in both of which localities, but especially at the base, moist râles were very distinct. I examined her, with Dr. Ruedi, who agreed with us in thinking her case peculiarly well suited for the locality, and found her rather better than on the former occasion, in so far as the moist râles had in great measure disappeared from the apex. She was none the worse for the journey—indeed, she felt rather better than when she started, and I mention her case only to show that patients may travel to Davos without any bad effects following.*

The next patient was a clergyman, 29 years of age, from one of the midland counties of England, who, as the result of overwork, contracted phthisis in the winter of 1876-7, and who has had slight hæmoptysis on four occasions since. He took a voyage to Australia in 1877-78, and last year wintered at Arcachon and Biarritz, but without any material benefit. He felt so ill when about to leave home, that he had grave doubts as to the propriety of starting. On his arrival on the 23rd of August last, he was so weak, and had so much dyspnœa as to be unable to walk. His cough, also, was very distressing, with abundant purulent nummular expectoration; his digestive organs were weak, although his appetite was fair. He was feverish; temperature, 101° Fahr.; had night sweats; was much emaciated, and very depressed in spirits;

* Dr. Ruedi's Report of Miss M.'s case, dated 1st December, 1879:—

"Is doing very well. Pulse, 88. Respirations, 14. Temperature, 36°·7 C. Circumference of the chest, 78 centimetres (2 more than at first). Weight, 120 Swiss pounds (5 pounds more than at first). Particularly the lower part of left lung much dryer, with very few moist râles, and hardly dull. But during the month of November a new feature has appeared, which must be considered. A small cavity set in in the left apex, without any fever or any pulmonary symptoms whatever. The cough is diminished, as well as the expectoration, though not very much. I regard the cavity as a sign of healing, because in a diseased apex, with adhesions all round, the formation of a cavity certainly can be produced by contraction of the connective tissue in the infiltrated parts: that there is no sign of new mischief the absence of fever, the general health, and increase of weight demonstrate."

weight 109 Swiss pounds; pulse, 96; measurements of chest—right side, 40 centimetres; left, 43. The two upper lobes of the right lung were dull, with bronchial breathing and moist râles. The left apex was also consolidated, though in a less degree, and was likewise the seat of moist râles.

When I examined him on the 25th September, a month after his arrival, the dulness at the left apex was less pronounced, and the moist râles almost gone from that part. On the right side, too, the râles had greatly diminished, and at times none at all could be heard. Measurements of chest—right side, 42; left, 43; being a gain of 2 centimetres on the right side. Pulse 82. He told me that he thought he was gaining weight, that his digestion was much improved, and that the night sweats had disappeared. There was no fever; the cough had much moderated; the expectoration was one third less; the dyspnoea was so far gone that he had no inconvenience from it, and could walk four miles easily at a good pace. He felt much stronger, his spirits were excellent, and he was satisfied that the place had suited him better than any other which he had previously visited.*

A builder, a married man, 59 years of age, of phlegmatic constitution and strongly made, who had always previously enjoyed good health, and whose family history was good, caught cold in the winter of 1875, and since then he has never been free from cough. In 1876 he was operated upon for fistula. During the winter of 1877-78 he had a little hæmoptysis, became hoarse, and could hardly speak above a whisper till the July following. The pulmonary symptoms having continued throughout the winter of 1878-79, he was recommended to go to Davos, where he arrived on the 25th of June. He then had much cough, especially at night, with heavy expectoration and shortness of breath. His weight was 124 Swiss pounds, being 14 pounds less than before his illness commenced. His bowels were habitually costive, but his digestion otherwise was pretty fair. Circumference of chest 85 centimetres; 44 on the right side, 41 on the left. At the right apex there was some dulness with crepitation. On the left side moist râles were very distinct at the base, while the

* Dr. Ruedi's Report of Mr. C.'s case, dated 1st December, 1879—
"Is going on very nicely. General health good; cough and expectoration further diminished. But in consequence of contraction of the upper part of the right lung vicarious emphysema is becoming developed at the right base posteriorly. The circumference of the chest is two centimetres greater than at the date of your examination, and he has gained 6 lbs. in weight."

whole of the upper lobe was very dull, with hardly any normal breath sounds, and there were the usual signs of a large cavity, with metallic sounds under the clavicle.

When I examined him on the 24th September, about three months after his arrival, there was still slight dulness at the right apex, but the crepitation was gone. On the left side the moist râles at the base had almost disappeared: in the upper lobe occasional moist râles were still to be detected, and the signs of excavation were still present, although the cavity was rapidly contracting, as shown by the lowering of the apex, the flattening of the chest wall over it, and the elevation of the apex of the heart to the level of the nipple, signs which were absent on his arrival. Circumference of chest 87 centimetres; on the right side 44; on the left 43; being a gain of 2 centimetres on that side. His cough was comparatively slight, and absent at night, the expectoration and dyspnoea were about one-third less he thought; his digestion was perfect, and his bowels quite regular, while he had gained 5 pounds in weight.

One more case will suffice, that of a young gentleman, 20 years of age, who had no hereditary tendency to consumption, and no previous illnesses, but who had sadly overworked himself, and whose illness commenced in the winter of 1876. On his first arrival at Davos on the 1st August, 1878, there were the usual signs of infiltration of the whole of the left lung, with very extensive moist râles, and a large cavity was detected at the lower part of the upper lobe. On the right side there was absence of good breath sound, with crepitation at the apex. Circumference of chest 76 centimetres; 39 on the right side, 37 on the left. He had a violent cough, with much purulent and nummular expectoration, great dyspnoea, night sweats, and fever (temp. 103.2° Fahr. at night, 101.5° in the morning.) His digestion was pretty good, and appetite fair. He weighed $113\frac{1}{2}$ Swiss pounds.

He remained at Davos till 14th February, 1879, during which time he gained 19 pounds, and improved so much that he insisted upon going home, from which, however, he returned on the 21st of June, having lost 13 pounds, and having suffered much in health in the interval.

I examined him on the 24th of September, when I found that the moist râles had disappeared from the lower part of the left lung: the cavity in the upper lobe was still present, though much contracted, and the moist râles were much less abundant. The crepitation had disappeared from the right apex. Circumference of chest 80 centimetres; 41 on the right side and 39 on the left, being a gain of 2 centimetres on each side. His

digestion was much improved, and fever and night sweats were absent. The cough and expectoration were slight, and the dyspnœa no longer complained of, indeed the day before I saw him he had walked 18 miles, including an ascent of 2,500 feet.

The class of cases likely to be benefited by a residence at Davos may now be mentioned. Of course, no one would think of recommending those whose symptoms are at all acute in character to leave home; and cases complicated with organic disease of the circulatory or nervous systems are unsuitable, the place being too intensely stimulating for such persons. It is likewise contra-indicated where a very large amount of lung tissue is involved, or when the disease occurs as a complication of bronchitis with emphysema; for, in this highly rarefied atmosphere, there is not a sufficiency of lung surface to ærate the blood, and such patients run the risk of being suffocated. The cases, in fact, which are most certain to do well are pretty much those which are most likely to improve elsewhere—namely, non-hereditary, uncomplicated cases of chronic phthisis, in which the extent of lung tissue involved is not excessive, with this proviso, however, that, while the prognosis of phthisis with pronounced stomach symptoms is not good at home, these are the very cases which should be sent to Davos, for there the appetite usually improves rapidly, and the digestive organs soon resume their normal vigour. It is a mistake to suppose, as some have done, that a tendency to hæmoptysis constitutes a contra-indication; and those who are interested in this point will find in the *Lancet*, for the 9th August, 1879, a very good illustration to the contrary, from the pen of Dr. Williams. Finally, laryngeal phthisis is only a little less likely to terminate unfavourably at Davos than at home.

It is pretty generally stated that patients must, of necessity, leave the place in the month of April, when the snow is melting. This, however, is not the case; indeed, they are less likely to suffer there than in other localities during this, the most trying season of the year; but in May and June it is advisable for them to have a change, not on account of the climate, but because they are apt to become *ennuyé* and are likely to be benefited by a change of scene, and of diet and regimen for a time. Hence, they are recommended to visit such places as Baden-Baden, Heidelberg, or Paris, and later on, if they feel disposed, they may return to England. The months of December, January, and February are those during which patients at Davos are most certain to be benefited, and if they do not improve then, and if there

is no sufficient cause to account for it, their future prospects are far from bright.

There is much difference of opinion as to the cause of the benefit derived by consumptives from a residence at Davos, but there are good grounds for believing that it is due to a combination of causes. In the first rank must be placed its elevation, with, as a consequence, its rarefied atmosphere, its bracing coolness, and its purity and antiseptic qualities. It is a mistake, however, to suppose that the inhabitants of elevated regions enjoy a complete immunity from phthisis; indeed, even at Davos, although it is very exceptional, Dr. Ruedi has seen five or six cases within the last few years, but these he could generally trace to errors of diet and hygiene. One case in particular, he mentioned, that of a young man who contracted the disease from living in a filthy, badly ventilated, and damp apartment, in which fungi were growing in profusion between his bed and the wall; but a few weeks after his removal to a more wholesome dwelling, the consolidation at the apices of his lungs had entirely disappeared, and he was completely restored to health.

Its virtues are likewise to be attributed, in part, to the intensity of the solar radiation, and to the dryness and stillness of the air; and if to this we add that the accommodation for patients is good, the sanitary arrangements excellent, the diet wholesome and nutritious, and the mode of living of the invalids (who are in the open air the greater part of the day, even in the depth of winter), carefully supervised by excellent medical men, we recognise a wonderful combination of beneficial influences, which our common sense tells us must yield good results, and which makes us cease to wonder that, year by year, increasing numbers of sufferers from consumption should hie to it in search of health.

